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10/004,604	11/01/2001	Galliano R. Busletta	TEPS-0007	8193

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EXAMINER

POKER, JENNIFER A

ART UNIT PAPER NUMBER

2832

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,604

Applicant(s)

BUSLETTA ET AL.

Examiner

Jennifer A. Poker

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 21-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 21-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

General Status

1. This is a second action on the merits of amendment received on June 24, 2003. Amended claims 1-10 and newly added claims 21-30 are pending and are being examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 29 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant states in claim 29, "...wherein said magnetic core comprises another magnetic core half..." It is not understood how a device can have 3 halves. It was understood by the examiner for examination purposes that the center leg was considered the 3rd half. Clarification is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4, 6, 7, 8, and 9 rejected under 35 U.S.C. 102(b) as being unpatentable by U.S. Patent Number 4,814,735 to Williamson.

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Regarding claims 1, 2, and 9, Williamson discloses windings for magnetic core devices comprising:

- (1) A ferrite core having upper and lower E core halves, (Figure 13)
- (2) Two interleaved helical coils (relative to upper and lower E core halves), such that when the core halves are mated and secured together, the coils are compressed. (Inherently springable) (Column 6, lines 30-33)
- (3) Tab leads (terminal) of the coil positioned to fit printed circuit board receiving slots. (Figure 13) (Column 2, lines 4-7)

Regarding claim 4, it is clearly illustrated in Figure 13 that the magnetic core has an integrally formed base, which is a mount for the legs of the E shaped core.

Regarding claims 6 and 7, Williamson states the windings are formed of flat conductor strips with an insulation coating. (No encapsulation) (Abstract) (Column 2, lines 26-27)

Regarding claim 8 the magnetic device as claimed by Williamson is applicable to various fields employing magnetic core inductor or transformers. (Column 1, lines 5-8)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 3, 5, and 10 are rejected under 35 U.S.C. 103(a) as being obvious over U.S. Patent Number 4,814,735 to Williamson.

Regarding claim 3, Williamson discloses the claimed invention including the helically wound winding capable of being compressed (inherent that it would have a spring constant), except for the specific range of 750 to 2000 grams/inch. It would have been obvious to one having ordinary skill in the art, at the time the invention was made to incorporate a favorable range for a spring constant, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Regarding claim 5, Williamson discloses the claimed ferrite core except for the ferromagnetic material having a composition selected from a group consisting of Cobalt-Iron, Manganese-Zinc, Nickel-Iron, and amorphous Nickel-Phosphide. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a suitable ferrous material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 415.

Regarding claim 10, Williamson states that the insulated flat metal ribbon comprising the winding has a width greater than the thickness (aspect ratio as defined by applicant: width to height), however he does not disclose the precise aspect ratio 1.6:1. It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to find a suitable/workable aspect ratio, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA)

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8. Claims 21-23 and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 4,814,735 to Williamson in view of Japanese Patent Number ⁽⁵⁶¹²⁷¹⁴⁾ to Takasaki.

Regarding claims 21, 22, 27, Williamson discloses windings for magnetic core devices comprising:

- (1) A ferrite core having upper and lower E core halves, (figure 13);
- (2) Two interleaved helical coils (relative to upper and lower E core halves), such that when the core halves are mated and secured together, the coils are compressed (inherently springable; column 6, lines 30-33);
- (3) Tab leads (terminal) of the coil positioned to fit printed circuit board receiving slots (figure 13; column 2, lines 4-7).

Williamson discloses the claimed invention except for the convex portion of the core half.

Takasaki discloses a transformer having a core comprising convex portions on the part of the bottom portion of the core in order to prevent the separation at a junction of a base plate and the core.

One skilled in the art, at the time the invention was made would have found it obvious to combine the teachings of Williamson with the teachings of Takasaki and incorporate convex portions on the lower part of the core half in order for the core to stand separately or to facilitate attachment to another portion.

Regarding claim 23, Williamson further illustrates in Figure 13 that the magnetic core has an integrally formed base, which is a mount for the legs of the E shaped core.

Regarding claim 24, Williamson further illustrates in figure 1 that there is a concave portion located on an upper surface of the core halves.

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Regarding claims 25, 26, 29, and 30 Williamson further illustrates in figure 13 that the magnetic core halves have outer legs and inner legs, wherein the 2 windings are placed about the center leg.

Regarding claims 28, Williamson states the windings are formed of flat conductor strips with an insulation coating (no encapsulation) (abstract) (column 2, lines 26-27).

Response to Arguments

9. Applicant's arguments filed June 24, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show the springable winding. Williamson states in column 6 that when the core halves are mated and secured together, the coils are then fully compressed. Examiner understand that the helical winding as disclosed by Williamson exhibits resistance to the compression (characteristic of a spring). The helical winding is inherently springable.

In response to the applicant's argument that the reference fails to show a terminus biased against the magnetic core, it is illustrated in the figures that the tab leads (terminals) of the coils are positioned away from the cores and because the initial state of the winding is decompressed, the winding is biased against the compression of the core (figure 13; column 2, lines 4-7).

Further arguments are illustrated below;

- (1) Objection to the abstract is withdrawn;
- (2) Objection to claims 5 & 8 for lack of antecedent basis is withdrawn;

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Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Poker whose telephone number is 703-305-4037. The examiner can normally be reached on 10:00-8:30 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on 703-308-7619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

jap
September 4, 2003

LINCOLN DONOVAN
PRIMARY EXAMINER
GROUP 2103